



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW1127G1-JM
UNIQUE ID NUMBER: 01P22PW161
COMBUSTOR: TALON X, Block-D
ENGINE TYPE: TF
BYPASS RATIO: 12.3
PRESSURE RATIO (π_{00}): 31.7
RATED THRUST (F_{00}) (kN): 120.4

REGULATORY DATA

| CHARACTERISTIC VALUE: | HC | CO | NO _x | SMOKE NUMBER |
|--|-----|------|-----------------|--------------|
| D _p /F ₀₀ (g/kN) or SN | 0.9 | 34.4 | 33.1 | 8.7 |
| AS % OF ORIGINAL LIMIT | 4.5 | 29.1 | 32.0 | 38.9 |
| AS % OF CAEP/2 LIMIT (NO _x) | | | 40.0 | |
| AS % OF CAEP/4 LIMIT (NO _x) | | | 47.1 | |
| AS % OF CAEP/6 LIMIT (NO _x) | | | 53.1 | |
| AS % OF CAEP/8 LIMIT (NO _x) | | | 61.9 | |

For non-volatile particulate matter (nvPM) emissions, please refer to the ICAO Engine nvPM Emissions Data Sheet.

DATA STATUS

- PRE-REGULATION
x CERTIFICATION
- REVISED (SEE REMARKS)

TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES
x DEDICATED ENGINES TO PRODUCTION STANDARD
- OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
(ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
- OUT OF PRODUCTION (DATE: -)
- OUT OF SERVICE (DATE: -)

MEASURED DATA

| MODE | POWER SETTING (%F ₀₀) | TIME (minutes) | FUEL FLOW (kg/s) | HC | CO | NO _x | SMOKE NUMBER |
|--|-----------------------------------|----------------|------------------|------|-------|-----------------|--------------|
| TAKE-OFF | 100 | 0.7 | 0.800 | 0.07 | 0.27 | 20.81 | 6.8 |
| CLIMB OUT | 85 | 2.2 | 0.670 | 0.07 | 0.36 | 16.95 | 4.5 |
| APPROACH | 30 | 4.0 | 0.232 | 0.06 | 4.89 | 10.59 | 0.3 |
| IDLE | 7 | 26.0 | 0.080 | 0.46 | 24.53 | 5.20 | 0.8 |
| LTO TOTAL FUEL (kg) or EMISSIONS (g) | | | 303 | 69 | 3374 | 3438 | - |
| NUMBER OF ENGINES | | | | 1 | 1 | 1 | 1 |
| NUMBER OF TESTS | | | | 4 | 4 | 4 | 4 |
| AVERAGE D _p /F ₀₀ (g/kN) or AVERAGE SN (MAX) | | | | 0.6 | 28.0 | 28.5 | 6.8 |
| SIGMA (D _p /F ₀₀ in g/kN, or SN) | | | | | | | |
| RANGE (D _p /F ₀₀ in g/kN, or SN) | | | | | | | |

ACCESSORY LOADS

POWER EXTRACTION 0 (kW)
STAGE BLEED 0 (% CORE FLOW)

AT - POWER SETTINGS
AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

| | |
|----------------------|-----------------|
| BAROMETER (kPa) | 101.5-102.2 |
| TEMPERATURE (K) | 279.6-300.8 |
| ABS HUMIDITY (kg/kg) | 0.00358-0.01201 |

FUEL

| | |
|----------|-----------|
| SPEC | Jet A |
| H/C | 1.91-1.93 |
| AROM (%) | 16.3-16.8 |

MANUFACTURER: Pratt & Whitney
TEST ORGANIZATION: Pratt & Whitney
TEST LOCATION: W. Palm Beach, FL
TEST DATES: 18/01/2020-21/01/2020

NO_x REGULATION PARAGRAPH

| | |
|---|-------------------|
| | 2.3.2 c) (CAEP/4) |
| | 2.3.2 d) (CAEP/6) |
| x | 2.3.2 e) (CAEP/8) |

REMARKS

1. Data from certification report PWA-12090
2. 1 engine tested
3. TALON-X, Block-D combustor
4. Certification in accordance with ICAO Annex 16 Vol. II. 4th Edition, Part III, Chapter 2.

Compliance with Fuel Venting requirements:

x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)